



**LICKING VALLEY**  
RURAL ELECTRIC COOPERATIVE CORPORATION  
P. O. Box 605 • 271 Main Street  
West Liberty, KY 41472-0605  
(606) 743-3179



Decemember 17, 2007

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PUBLIC SERVICE  
COMMISSION

Director of Engineering,  
Public Service Commission  
P.O. Box 615  
Frankfort, KY 40602

RE: Administrative Case No. 2006-00494  
An Investigation of The Reliability Measures of Kentucky's Jurisdictional Electric  
Distribution Utilities and Certain Reliability Maintenance Practices

Dear Sir:

Please find enclosed the information requested in Administrative Case No. 2006-00494. The information requested is A Investigation of The Reliability Measures of Kentucky's Jurisdictional Electric Distribution Utilities and Certain Reliability Maintenance Practices.

If additional information is needed, please advise.

Sincerely,

Larry R. Easterling  
Superintendent of Operations

LRE:on

C: Kerry Howard

Licking Valley Rural Electric Cooperative Corporation  
Response  
Item 1

**1. Licking Valley Rural Electric Cooperative Corporation Annual Reliability Report.**

**Licking Valley Rural Electric Cooperative Corporation has a distribution reliability improvement program. Our distribution reliability program is managed by outage reports, line inspection reports, maintenance reports and consumer requests. Areas of concern are reported to management, which then takes the appropriate action for response to the situation. It is our opinion that these reports, which are prepared by our cooperative employees, are principal indicators of our distribution reliability and the efficiency of this program. We have enclosed, for your convenience, copies of Licking Valley Rural Electric Cooperative Corporation's Current Work Plan, which we feel is a very aggressive four year work plan.**

Licking Valley Rural Electric Cooperative Corporation  
Response  
Item 2

**2. Licking Valley Rural Electric Cooperative Corporation Vegetation Management Plan.**

**Licking Valley Rural Electric Cooperative Corporation has an aggressive vegetation management program and has contracted W. A. Kendall to address our cooperatives right-of-way requirements. Our cooperative likes to maintain sixty-foot of right-of-way clearance on new and existing accounts, however some variety in right-of-way clearing is based on geography/terrain, easement widths, line voltages and property owner issues. W. A. Kendall works with five (5) three (3) men crews. One crew runs a bucket truck and a chipper and their main concern are consumer requests and hot spots. One crew concentrates primarily on new right-of-way clearing. Three crews work on substation and circuit right-of-way clearing. In addition to W.A. Kendall, the cooperative has a bush hog that is used for right-of-way clearing when not in use by construction or maintenance crews. The cooperative provides one right-of-way crew, and W. A. Kendall also provides a crew that concentrates on Herbicide Treatment, primarily for the months of May until August or September.**

**NEW MEMBER EXTENSIONS – RUS CODE 100**

A total of 2,000 new services are anticipated. The projected cost is \$3,493,500. The average length of service per customer is 100 feet. The total projected length for the work plan period is 38 miles. Cost history and projections are shown in Table III-B-1.

**SYSTEM IMPROVEMENTS – RUS CODE 300**

***LINE CONVERSION NARRATIVES***

**Index Substation** *Centerville*

**Code 301-8**

Estimated Cost: \$112,000

Year: 2008

**Description of Proposed Construction**

Section 132 – Convert 2.8 miles of single-phase 6ACWC to two-phase #2 ACSR. (Caney Creek area).

**Reason For Proposed Construction**

The section is overloaded aged conductor. Therefore, Design Criteria (DC) items 4 and 5 are being violated.

**Results of Proposed Construction**

Single-phase overloading will be corrected and aged conductor replaced.

**Alternative Corrective Plan Investigated**

Since this section was aged conductor and overloaded, no alternatives were considered.

**Maytown Substation** *Swangto Fork*

**Code 302-9**

Estimated Cost: \$176,000

Year: 2007

**Description of Proposed Construction**

Section 171 – Convert 3.2 miles of single-phase 6ACWC to three-phase 1/0 ACSR. (Hwy 2027 area).

**Reason For Proposed Construction**

The section is overloaded aged conductor. Therefore, Design Criteria (DC) items 4 and 5 are being violated.

**Results of Proposed Construction**

Single-phase overloading will be corrected and aged conductor replaced.

**Alternative Corrective Plan Investigated**

Since this section was aged conductor and overloaded, no alternatives were considered.

**SYSTEM IMPROVEMENTS – RUS CODE 300**

**Campton Substation** *Tree T H.G.*

**Code 303-7**

Estimated Cost: \$166,060

Year: 2010

**Description of Proposed Construction**

Section 212 – Convert 1.9 miles of three-phase 4ACWC to three-phase 336.4 ACSR.(Hazel Green area).

**Reason For Proposed Construction**

The section is a very weak link between major tie points from both the Helechewa and Maytown substations. DC item 5 is violated.

**Results of Proposed Construction**

Reliability in the area will be greatly improved. A major line that is aged conductor will be replaced.

**Alternative Corrective Plan Investigated**

This was a reliability issue. There were no alternatives.

**Campton Substation** *Bethowp case Br.*

**Code 304-7**

Estimated Cost: \$115,500

Year: 2007

**Description of Proposed Construction**

Sections 9046 & 443 – Convert 2.1 miles of single-phase 6ACWC to three-phase 1/0 ACSR.(Hollonville area).

**Reason For Proposed Construction**

DC Items 1, 4 and 5 are being violated.

**Results of Proposed Construction**

Single-phase overloading will be relieved. Voltage drop problems will be corrected. Aged conductor will be replaced.

**Alternative Corrective Plan Investigated**

No alternatives were considered for this project.

**SYSTEM IMPROVEMENTS – RUS CODE 300**

**West Liberty Substation**

**Code 306-4**

Estimated Cost: \$109,710

Year: 2009

**Description of Proposed Construction**

Section 27 – Convert 2.3 miles of single-phase 6ACWC to three-phase #2 ACSR.(Redwine area).

**Reason For Proposed Construction**

This overloaded section is composed of aged copper. DC items 4 & 5 are being violated.

**Results of Proposed Construction**

Single-phase overloading will be corrected and aged conductor replaced.

**Alternative Corrective Plan Investigated**

No alternatives were considered for this project.

**West Liberty Substation**

**Code 307-4**

Estimated Cost: \$543,360

Year: 2010

**Description of Proposed Construction**

Sections 65, 70, 1010 & 56 – Convert 6.4 miles of single-phase 6ACWC to three-phase 336.4 ACSR.(Dehart area). *Kellumey*

**Reason For Proposed Construction**

The aged conductor represents a strong tie between the West Liberty Substation and the Maytown Substation.

**Results of Proposed Construction**

Service reliability will be greatly improved. Aged conductor will be replaced and the Ezel Substation construction will be deferred.

**Alternative Corrective Plan Investigated**

No alternatives were considered.

**SYSTEM IMPROVEMENTS – RUS CODE 300**

**Crockett Substation** Cow Br

**Code 308-10**

Estimated Cost: \$560,320

Year: 2009

**Description of Proposed Construction**

Sections 122, 123 & 125 – Convert 6.8 miles of three-phase #2ACWC to three-phase 336.4 ACSR.(Elamton area).

**Reason For Proposed Construction**

These sections represent a major feed into an area that is many miles from a substation source. System stability is an issue.

**Results of Proposed Construction**

Reliability and system stability will be improved.

**Alternative Corrective Plan Investigated**

Since the present load level does not require a substation study, no alternatives were considered.

**Helechewa Substation**

**Code 309-3**

Estimated Cost: \$44,000

Year: 2007

Lacey CK

**Description of Proposed Construction**

Section 222 – Convert 1.1 miles of single-phase 6ACWC to two-phase #2 ACSR.(Hwy 1010 area).

**Reason For Proposed Construction**

The section is experiencing single-phase overloading. Design Criteria (DC) item 4 is being violated.

**Results of Proposed Construction**

Single-phase overloading will be corrected.

**Alternative Corrective Plan Investigated**

The line is an age conductor radial. No alternatives were considered.

**SYSTEM IMPROVEMENTS – RUS CODE 300**

**Helechewa Substation**

**Code 310-3**

Estimated Cost: \$428,260

Year: 2010

**Description of Proposed Construction**

Sections 223, 224 & 226 – Convert 4.9 miles of three-phase 6ACWC to three-phase 336.4ACSR. (~~Hazel Green to Mize~~)-

**Reason For Proposed Construction**

The section is a major tie with the Index Substation. DC item 5 is being violated.

**Results of Proposed Construction**

Aged conductor will be replaced and reliability will be improved.

**Alternative Corrective Plan Investigated**

No alternatives were considered.

**Oakdale Substation**

**Code 311-2**

Estimated Cost: \$453,200

Year: 2009

**Description of Proposed Construction**

Sections 78, 1000 & 602 – Convert 5.5 miles of single-phase 6ACWC to three-phase 336.4 ACSR from Oakdale Substation to Chenowee up to Elkatawa.

**Reason For Proposed Construction**

A 2,000 kW coal tipple operation is planned. DC 1 will be violated.

**Results of Proposed Construction**

DC 1 violation will be corrected.

**Alternative Corrective Plan Investigated**

The substation has capacity to serve, the feeder did not. No alternatives were considered.

**MISCELLANEOUS DISTRIBUTION EQUIPMENT – RUS CODE 600's**

**Meters and Transformers – RUS Code 601**

1,000 new transformers are projected at a cost of \$925,750.  
2,000 new residential meters are projected at a cost of \$272,000.  
108 new 3-phase AMR meter are projected at a cost of \$82,701.  
Historical data was gathered for meters and transformers and is included in Table III-B-1.

**Service Upgrades – RUS Code 602**

There are 268 service upgrades projected at a total cost of \$333,459. Historical data is included in Table III-B-1.

**Sectionalizing – RUS Code 603**

Overcurrent analysis is performed on an ongoing basis. Device changeouts, conductor multiphasing and load shifts require overcurrent device purchases.  
Oil circuit reclosers, fuses and switches are included in this category. \$125,000 for each of the four years has been allocated. The total projected cost for sectionalizing is \$500,000.

**Voltage Regulators – RUS Code 604**

Four sets of voltage regulator additions are projected for the CWP as follows:

CFR CODE	SUBSTATION	SECT/RATING	YEAR	COST
604.1	HELECHEWA	509 upgd 3-150A	2008	\$40,000
604.2	CAMPTON	216 (3) 150 A	2008	\$40,000
604.3	ZACHARIAH	346 upgd 3-150A	2008	\$40,000
604.4	WEST LIBERTY	105 load 3-219A	2008	\$45,000

*Town Flat  
Seite  
still water after tree  
Rose before clear  
519  
D. L. e. G. B.*

**Capacitor Banks – RUS Code 605**

Add current control for switched capacitor bank on Campton Substation Line section 377 at a cost of \$3,000. *still water after calculator*

**Pole Changes – RUS Code 606 Including Clearance Poles**

There are 880 projected pole changes in the CWP. This includes all maintenance and clearance poles. The cost for the pole changes is projected to be \$1,459,920. Historical cost data for pole changes may be found in Table III-B-1.

**Non-Specific Aged Conductor Replacement – RUS Code 608**

10 miles per year of aged conductor will be replaced on an as-needed basis. The projected cost is \$1,464,265.

**RUS CODE 700**

**Security Lights – RUS Code 701**

A total of 1,400 new security lights are anticipated. The projected cost is \$569,800. Security light cost history and projections are shown in Table III-B-1.